



Material Control and Accountability (MC&A)

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**Natalie Barnett
Sandia National Laboratories**





Outline

- **Context**
- **Objectives**
- **Material**
- **Control**
- **Accountability**
- **Challenges and Benefits**
- **Summary**

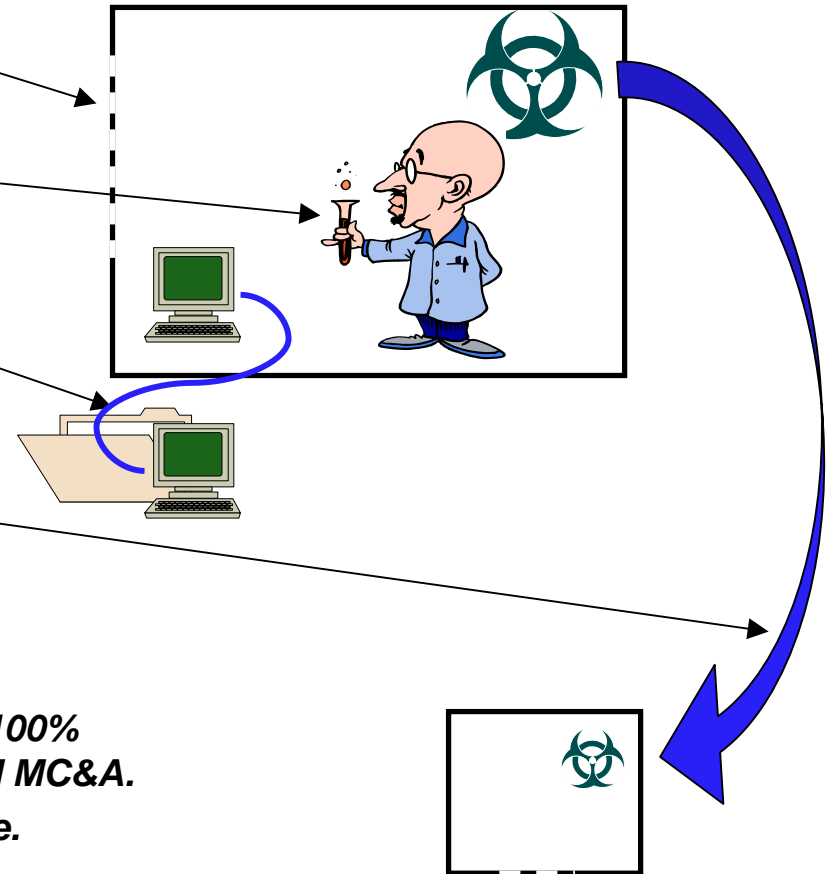
Integrated Biosecurity

- Physical security

- Personnel management

- Information security

- Material transport



*If these other measures were 100% effective, we wouldn't need MC&A.
But they are not 100% effective.*

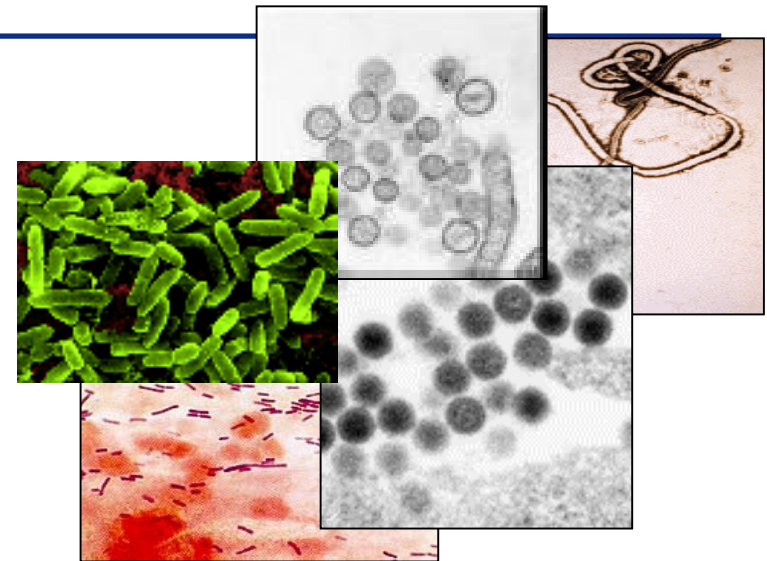


Objective of MC&A

- **Assure the complete and timely knowledge of:**
 - **What materials exist**
 - **Where the materials are**
 - **Who is accountable for them**
- **NOT: to detect whether something is missing**

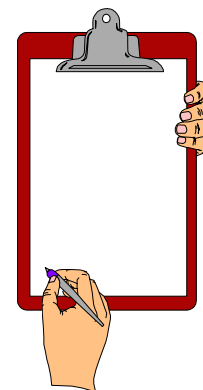
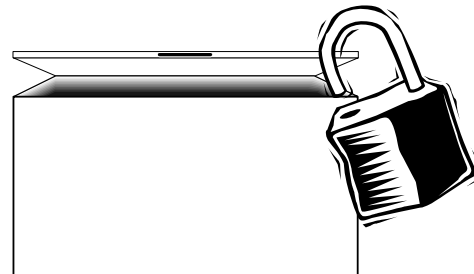
Material Control & Accountability

- Agent
- Quantity
- Form
- Detail
- Other



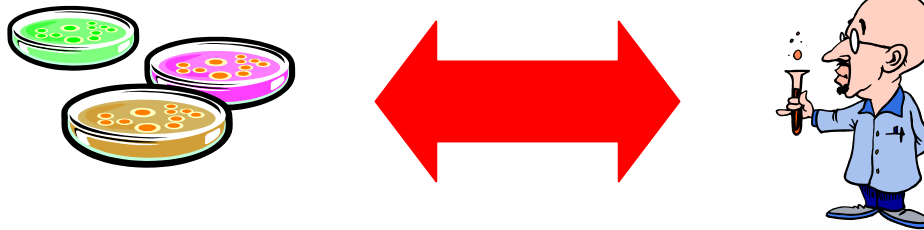
Material Control & Accountability

- Control is either...
 - Engineered / Physical
 - Administrative
- Containment is part of material control
 - Containment Lab / Freezer / Ampoule
- Procedures are essential for material control
 - For both normal and abnormal conditions



Material Control & Accountability

- All material should have an associated “accountable person”



- Procedures should ensure accountability



Challenges and Benefits

- **We want to *avoid*...**

- Implementing poor MC&A measures
- Making “real work” more burdensome
- Imposing unacceptable costs: time / money / effort
- Spreading knowledge of inventory information

- **Benefits**

- Prevents, or makes more difficult, some easy material diversion scenarios
- Documents lab status *before* any problems occur
 - ◆ Better than forensic work *afterwards*
- Is consistent with and reinforces good laboratory practice



Summary

- **MC&A is an important component of biosecurity**
 - **Complements other measures**
 - **Has measurable objectives**
- **MC&A consists of**
 - **Identifying the materials of concern**
 - **Controlling those materials by**
 - ◆ **Containment**
 - ◆ **Procedures**
 - **Accountability**
- **MC&A can improve biosecurity, but presents challenges**
 - **Criteria for assessing MC&A measures**
 - **Effective implementation is key**